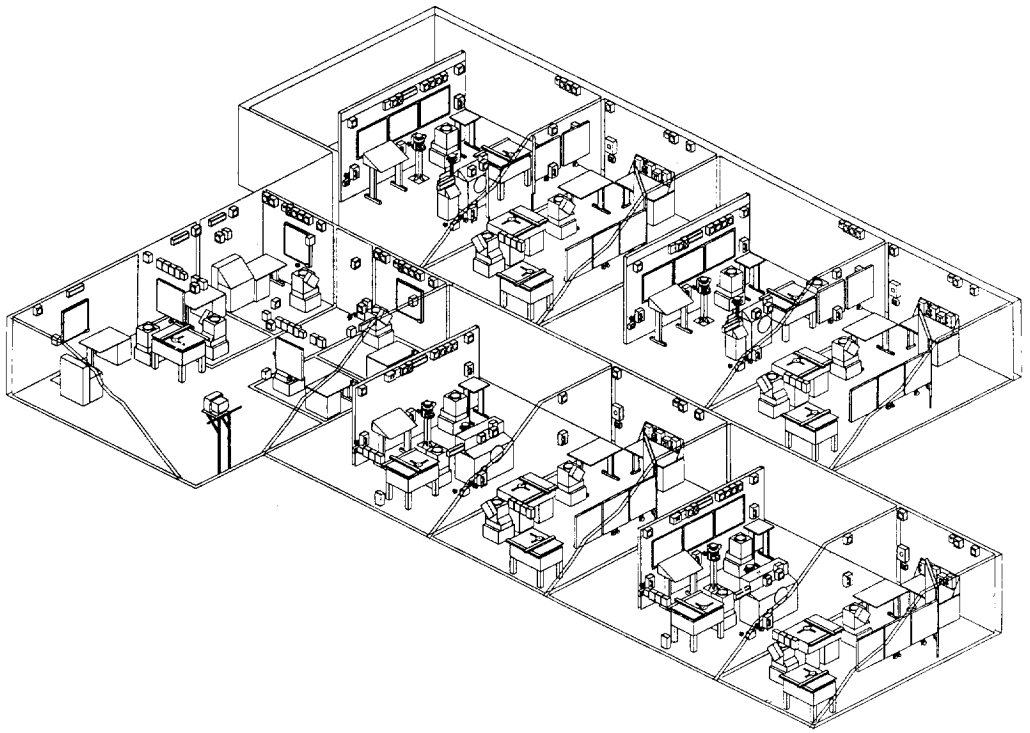
DIRECTORY OF NAVAL TRAINING DEVICES



SWOSCOL BRIDGE/CIC SIMULATOR, DEVICE 20B6D

TRAINING CATEGORY:

BRIDGE/COMBAT INFORMATION CENTER

ORIGINATING AGENCY:

CNET

SECURITY CLASSIFICATION:

Device 20B6D is unclassified.

PURPOSE:

To provide realistic environment for training and practice in Bridge and CIC duties.

INTENDED USE:

The Device 20B6D is intended to be used in conjunction with classroom training of newly commissioned and junior line officers with no at-sea operational experience.

FUNCTIONAL DESCRIPTION:

The Device 20B6D consists of four (4) independent Bridge/CIC "ownship" mockups, each with its own Problem Control Center (PCC), and a separate Coordinating Problem Control Center (CPCC). Controllable interface networking allows for each student-manned Bridge/CIC mockup to conduct independent standalone training exercises under direction of an instructor at the respective PCC, or for two, three, or all four mockups to participate in a single coordinated exercise under direction of an instructor at the CPCC.

BRIDGE: Two of the four Bridge mockups simulate the equipment typical of an FF-1052 Frigate Class steam, single screw vessel. The other two Bridge Mockups simulate the bridge equipment typical of a DD-963 Destroyer Class gas turbine, twin screw vessel. Each Bridge mockup contains the respective simulated equipment for ship control, interior and exterior ship communications, and display of radar/sonar information. The radar/sonar units (RSDUs) simulate radar air search, radar surface search, sonar omnidirectional scan, and sonar sector search scan on a selectable basis at the individual unit.

CIC: The four CICs are identical and typify the CIC equipment found aboard vessels of either class. This includes simulated equipment for plotting; dead reckoning; interior/exterior ship communications as on the Bridge; radar display with simulated IFF/SIF capability; and sonar display.

PCC: The four PCCs are identical, each providing an interactive instructor station and a radar/sonar display capability for instructor control and monitoring student performance during the exercise. A communications console enables the instructor to monitor any student communications circuit, to initiate communications over these circuits in a role playing capacity, or to communicate securely with instructors in the other PCCs or CPCC.

CPCC: The CPCC is configured with an instructor station and a radar/sonar display capability which, because of the networking, also allows the CPCC instructor to view the radar/sonar display from the perspective of any participating mockup. A communications console enables the CPCC instructor to monitor communications among mockups, initiate communications, and to communicate securely with the participating PCC instructors. Two (2) large screen CRT monitors support post-exercise critique, and a digitizer supports creation/modification of radar/sonar landmass data bases.

NETWORKS: The device, comprising 39 processors, operates in real time across three different networks: first, the main local area network (LAN) interconnects the four (4) PCCs and the CPCC, allowing for all combinations of standalone and coordinated exercise; second, an implementation of Ship Analytics DATA-NET digital/analog data bus in each mockup connects all Bridge/CIC controls and indicators with the PCC, minimizing separate interface requirements and special interconnecting cabling; third, a separate LAN interconnects all R/SDUs within a mockup and the respective PCC and the CPCC.

SIMULATION: The software driving the device has the capability of simulating a complex multithreat tactical environment complete with ownship dynamics, controls, indicators, and other ship functions; up to 60 target types with corresponding dynamics and target specific data; navigational data, electronic warfare data, and environmental conditions. Simulation control is accomplished either by use of preprogrammed scenarios, or by the instructor(s) manual interaction with the simulation through the instructor station.

SUMMARY: The Device 20B6D trainer provides the nexessary stimuli to allow trainees to exercise their command and control functions in a realistic tactical environment. The control functions allow the instructor(s) to systematically generate, initialize, and control tactical scenarios in accordance with defined training objectives, and to monitor/instruct student performance with respect to those objectives during and following exercise conduct.

PHYSICAL INFORMATION:

	QTY	WxDxH (in)	WT
Steering Stand*	2	31.0 x 23.0 x 51.0	350
Engine Order Telegraph*	2	16.0 x 20.5 x 56.0	225
Ship Control Console**	2	60.0 x 30.0 x 54.5	425
Binnacle	4	17.0 x 17.0 x 49.0	70
Pelorus	4	17.0 x 17.0 x 49.0	100
Radar/Sonar Display Unit (w/o IFF)†	9	25.2 x 24.5 x 32.0	190
Radar/Sonar Display Unit (w/IFF)†	16	31.0 x 24.5 x 41.0	205
DRA/DRT Assembly	4	52.0 x 49.0 x 44.0	500
CIC Comm.s Table	4	60.0 x 33.0 x 52.0	350
36" Status Board	16	39.0 x 3.0 x 39.0	117
36" Polar Plot	4	39.0 x 3.0 x 39.0	117
60" Air Plot	4	63.0 x 4.0 x 63.0	170
PCC Instructor Station	4	48.0 x 33.0 x 46.0	250
PCC Comm.s Console	4	36.0 x 30.0 x 48.0	250
CPCC Instructor Station	1	48.0 x 33.0 x 46.0	225
CPCC Comm.s Console	1	36.0 x 30.0 x 48.0	250
Log Table	2	43.0 x 28.0 x 42.0	80
Chart Table w/Lamp	9	51.0 x 36.0 x 41.0	100
Maneuvering Board Table	4	24.0 x 24.0 x 42.0	50
Overhead Indicators		VARIOUS	
Communications Equipment		VARIOUS	

* Based on FF-1052 Frigate Class Bridge.
** Based on DD-963 Destroyer Class Bridge.
† RSDU simulate AN/SPA-25F Tactical Equipment.
IFF simulate AN/UPA-59A Tactical Equipment.

EQUIPMENT REQUIRED (NOT SUPPLIED):

1. Dead Reckoning Analyzer (DRA)
2. Dead Reckoning Tracer (DRT)

ENVIRONMENTAL LIMITS:

Temperature: 65° - 75° F

Humidity: 40% - 60%

DIRECTORY OF NAVAL TRAINING DEVICES

POWER REQUIREMENTS:

60 Hz ± 10% 208 VAC 66.5 KVA 3-Phase, 4-Wire WYE

Rated: 43,820 Watts = 381 Amps @ 115 VAC

PUBLICATIONS FURNISHED:

1. NTSC P5593 (U) Operator & Maintainer Manual
2. NTSC P5594 (U) Preventitive Maintenance Manual
3. NTSC P5595 (U) Commercial Computer Documentation Set
4. NTSC P5596 (U) Instructor Utilization Handbook
5. NTSC P5597 (U) On-the-Job Training Handbook
6. Pilotship 2000 Shiphandling Simulator Software Documentation Set (4 vols) @ Ship Analytics

PERSONNEL REQUIREMENTS (Estimated):

Instructors:	Navy Enlisted E6-E7 Five (5) Enlisted qualified, Enlisted Surface Warfare
Instructors:	Navy Officer Nine (9) Officer Graduate, Naval Surface Warfare Advanced Course, Graduate, Instructor School Combat Systems Tour of Duty
Trainees:	Sixty (60) Graduate, 4-year accredited college above average college grades. No sea or operational experience.
Field Engr:	One (1) Engineering degree or relevant technical qualifying experience.
Field Tech:	One (1) Associates degree or equivalent technical qualifying experience.

CONTRACT IDENTIFICATION:

Manufactured by Ship Analytics, Inc., North Stonington, CT 06359, under NAVTRASYSCEN Contract No. N61339-87-C-0128.

LOCAL STOCK NUMBER:

6930-LL-C00-6860